## Climatic Change

**Contents of Volume 87** 

Volume 87 · Numbers 1-2 · March 2008

Special Issue: Modelling Climate Change in the European North Guest Editors: Manfred Lange · Hedwig Roderfeld · Rik Leemans

BALANCE: an attempt to assess climate change impacts in the Barents Sea Region M.A. Lange  $\cdot$  H. Roderfeld  $\cdot$  R. Leemans 1

Assessing climate change impacts in the European north M.A. Lange 7

Influence of changed vegetations fields on regional climate simulations in the Barents Sea Region

H. Göttel · J. Alexander · E. Keup-Thiel · D. Rechid · S. Hagemann · T. Blome · A. Wolf · D. Jacob 35

Future changes in vegetation and ecosystem function of the Barents Region A. Wolf  $\cdot$  T.V. Callaghan  $\cdot$  K. Larson 51

Sensitivity of an ecosystem model to hydrology and temperature A. Wolf  $\cdot$  E. Blyth  $\cdot$  R. Harding  $\cdot$  D. Jacob  $\cdot$  E. Keup-Thiel  $\cdot$  H. Goettel  $\cdot$  T. Callaghan 75

Impact of non-outbreak insect damage on vegetation in northern Europe will be greater than expected during a changing climate

A. Wolf · M.V. Kozlov · T.V. Callaghan 91

Losses of birch foliage due to insect herbivory along geographical gradients in Europe: a climate-driven pattern?

M.V. Kozlov 107

Potential impact of climate change and reindeer density on tundra indicator species in the Barents Sea region

C. Zöckler · L. Miles · L. Fish · A. Wolf · G. Rees · F. Danks 119

River discharge and freshwater runoff to the Barents Sea under present and future climate conditions

R. Dankers · H. Middelkoop 131

Impact of climatic change on the biological production in the Barents Sea I.H. Ellingsen · P. Dalpadado · D. Slagstad · H. Loeng 155

Capelin migrations and climate change – a modelling analysis G. Huse · I. Ellingsen 177

Vulnerability of European reindeer husbandry to global change W.G. Rees · F.M. Stammler · F.S. Danks · P. Vitebsky 199

Vulnerability and adaptive capacity in forestry in northern Europe: a Swedish case study E.C.H. Keskitalo 219

Effects of climate change and extreme events on forest communities in the European North

L. Lundmark · A. Pashkevich · B. Jansson · U. Wiberg 235

An integrated study of economic effects of and vulnerabilities to global warming on the Barents Sea cod fisheries

A. Eide 251

Assessing climate change vulnerability in the arctic using geographic information services in spatial data infrastructures

L. Bernard · N. Ostländer 263

Potential impact of climate change on ecosystems of the Barents Sea Region H. Roderfeld · E. Blyth · R. Dankers · G. Huse · D. Slagstad · I. Ellingsen · A. Wolf · M.A. Lange 283

## Volume 87 · Numbers 3-4 · April 2008

Biosphere carbon stock management: addressing the threat of abrupt climate change in the next few decades: an editorial essay

P. Read 305

Biomass with capture: negative emissions within social and environmental constraints: an editorial comment  $% \left( 1\right) =\left( 1\right) \left( 1\right) \left($ 

J.S. Rhodes · D.W. Keith 321

"Biosphere carbon stock management: addressing the threat of abrupt climate change in the next few decades." By Peter Read. An editorial comment J.E. Leake 329

Large-scale biomass for energy, with considerations and cautions: an editorial comment G. Marland  $\cdot$  M. Obersteiner 335

"Biosphere carbon stock management: addressing the threat of abrupt climate change in the next few decades." By Peter Read. An editorial comment C.J. Jepma 343

The probability of wind damage in forestry under a changed wind climate K. Blennow  $\cdot$  E. Olofsson 347

The relationship between climate and outbreak characteristics of the spruce budworm in eastern Canada

D.R. Grav 361

AgClimate: a case study in participatory decision support system development N.E. Breuer · V.E. Cabrera · K.T. Ingram · K. Broad · P.E. Hildebrand 385

Twentieth-century trends in the thermal growing season in the Greater Baltic Area H.W. Linderholm  $\cdot$  A. Walther  $\cdot$  D. Chen 405

Climate change and soil freezing dynamics: historical trends and projected changes  $\rm H.A.L.\ Henry\ 421$ 

Quantitative observations of a major coral bleaching event in Barbados, Southeastern Caribbean

H.A. Oxenford · R. Roach · A. Brathwaite · L. Nurse · R. Goodridge · F. Hinds · K. Baldwin · C. Finney 435

Impact of climate change on Pacific Northwest hydropower M.S. Markoff · A.C. Cullen 451

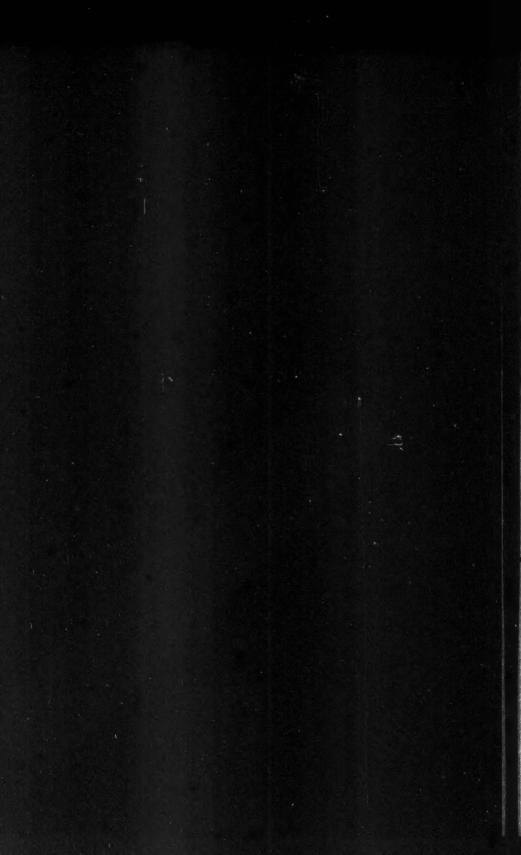
A new method to reconstruct low-frequency climatic variability from documentary sources: application to winter rainfall series in Andalusia (Southern Spain) from 1501 to 2000 F.S. Rodrigo 471

Wavelet analysis of a centennial (1895–1994) southern Brazil rainfall series (Pelotas,  $31^\circ46'19''S$   $52^\circ20'$  33''W)

M.P. Souza Echer · E. Echer · D.J. Nordemann · N.R. Rigozo · A. Prestes 489

Daily temperature and pressure series for Salem, Massachusetts (1786–1829) G. van der Schrier · P.D. Jones 499

A high-quality monthly pan evaporation dataset for Australia B. Jovanovic · D.A. Jones · D. Collins 517



## **AUTHOR INDEX**

(Volume 87)

Alexander, J., 35 Baldwin, K., 435 Bernard, L., 263 Blennow, K., 347 Blome, T., 35 Blyth, E., 75, 283 Brathwaite, A., 435 Breuer, N.E., 385 Broad, K., 385 C.J. Jepma, 343 Cabrera, V.E., 385 Callaghan, T., 75 Callaghan, T.V., 51, 91 Chen, D., 405 Collins, D., 517 Cullen, A.C., 451 Dalpadado, P., 155 Dankers, R., 131, 283 Danks, F., 119 Danks, F.S., 199 Echer, E., 489 Eide, A., 251 Ellingsen, I., 177, 283 Ellingsen, I.H., 155 Finney, C., 435 Fish, L., 119 Goettel, H., 75 Goodridge, R., 435 Göttel, H., 35 Gray, D.R., 361 Hagemann, S., 35 Harding, R., 75 Henry, H.A.L., 421 Hildebrand, P.E., 385 Hinds, F., 435 Huse, G., 177, 283 Ingram, K.T., 385 Jacob, D., 35, 75 Jansson, B., 235 Jepma C.J., 343 Jones, D.A., 517 Jones, P.D., 499 Jovanovic, B., 517

Keith, D.W., 321 Keskitalo, E.C.H., 219 Keup-Thiel, E., 35, 75 Kozlov, M.V., 91, 107 Lange, M.A., 1, 7, 283 Larson, K., 51 Leake, J.E., 329 Leemans, R., 1 Linderholm, H.W., 405 Loeng, H., 155 Lundmark, L., 235 Markoff, M.S., 451 Marland, G., 335 Middelkoop, H., 131 Miles, L., 119 Nordemann, D.J., 489 Nurse, L., 435 Obersteiner M., 335 Olofsson, E., 347 Ostländer, N., 263 Oxenford, H.A., 435 Pashkevich, A., 235 Prestes, A., 489 Read, P., 305 Rechid, D., 35 Rees, G., 119 Rees, W.G., 199 Rhodes, J.S., 321 Rigozo, N.R., 489 Roach, R., 435 Roderfeld, H., 1, 283 Rodrigo, F.S., 471 Slagstad, D., 155, 283 Souza Echer, M.P., 489 Stammler, F.M., 199 van der Schrier, G., 499 Vitebsky, P., 199 Walther, A., 405 Wiberg, U., 235 Wolf, A., 35, 51, 75, 91, 119, 283 Yerokhin, S., 227 Young, P.C., 357 Zöckler, C., 119